O. H. M. S.

W. J. Gerald

Deputy Minister.

LABORATORY

OF THE

INLAND REVENUE DEPARTMENT

OTTAWA, CANADA

BULLETIN No. 209

Spiritus Menthæ Piperitæ.

3828—1

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Spiritus Menthæ Piperitæ.

OTTAWA, June 15, 1910.

W. J. GERALD, Esq.,
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you herewith the results of examination of 71 samples of Spirit of Peppermint, purchased throughout Canada in March of this year.

Spiritus Menthæ Piperitæ popularly known as Spirit of Peppermint, is thus prepared according to the British Pharmacopœia (Edn 1898):—

	Imperial.	Metric.
Oil of Peppermint	1 fl. ounce	50 cc
Alcohol (90 p.c.)	a sufficient quantity.	

To the oil of peppermint add enough of the alcohol to form 10 fluid ounces (or 500 cc) of the spirit of peppermint

The spirit of peppermint of the British Pharmacopœia of 1885 contained only one-fifth as much oil of peppermint as the above.

The manufacture is very simple, being merely the solution of a proper quantity of the oil in alcohol of correct strength. Hence we find that spirit of peppermint is usually prepared by the local druggist.

Adulteration may consist in (1) using an adulterated oil of peppermint; (2) using incorrect proportion of oil of peppermint; (3) using alcohol of incorrect strength: (4) using wood alcohol (or methylated spirit) instead of ethyl alcohol; (5) using an ingredient not prescribed by the pharmacopœia, such as a dye.

1. Oil of peppermint is, for various reasons, less liable to adulteration than most essential oils. No special examination of the separated oil has been made, in the case of samples now reported.

2. The oil should constitute one-tenth part by volume of the finished preparation. The method of dilution and separation employed in this work is described by Leach (Food Inspection and Analysis, 2nd Edn. p. 865) and yields a very close approximation to the actual content of oil, as proved by working upon samples prepared in the laboratory. Thirty-one (31) samples, being 44 per cent, of the total collection, were found to contain the proper amount of oil of peppermint, The remainder exhibit great carelessness in preparation, and 32 samples contain only 5 per cent of oil, or less than this amount.

3. Alcohol has been approximately determined from the specific gravity [illegible] the sample; and exceeds 80 per cent (volume) in 65 samples (92 per cent of the collection).

4. No methyl alcohol is present in any of these samples.

5. Only one sample (38667) is dyed, with an aniline dye. Several samples contain small amounts of turmeric.

It is proper to observe that the above samples were obtained in drug shops, and are, therefore assumed to represent the pharmacopœial preparation.

A spirit or essence of peppermint is used in the kitchen as a flavour in candy making, and for other purposes. Such an article is in reality a flavouring extract, and should not be offered by a druggist, as being identical with the spirit of peppermint of the pharmacopœias. It is possible that samples 38667. 38669, 996, 40417, 42926, 44252, and some others which contain alcohol of distinctly less than prescribed strength, may have been intended by the manufacturer, as *flavouring extracts* rather than as pharmacopœial preparations. Indeed, in the case of one of these (No. 42926) the vendor stated that the article sold, was not the spirit of peppermint of the pharmacopœia. This statement, however, was not made until the sale was completed.

It may be permitted to me to observe that the very indefinite and miscellaneous character of the stocks carried in modern drug shops, has the disadvantage of making these less distinctively apothecary shops than was the case formerly. Many modern drug shops might, with equal propriety be classed as candy shops, refreshment counters, tobacconists, &c. That a druggist should carry peppermint flavouring extract, as well as the B. P. article, need cause us no surprise. It would be folly to inveigh against modern innovations, which may be the natural trend of things in course of betterment. But so long as the distinctive name drug shop is retained, I think it not too much to require that the salesman should be familiar with the preparations of the British Pharmacopœia, and that he should not be permitted to supply other than pharmacopœial preparations, when a customer asks for such, under a name recognized by the pharmacopœia. Spirit of peppermint, or *spiritus menthæ piperitæ* is a perfectly definite article, having legally recognized composition, and although its nature is such that no particular danger to health is likely to result from the substitution of a flavouring extract of peppermint, yet the same carelessness which permits the substitution, might, in other cases, be followed by very serious consequences.

It will be noted that many of the samples are labelled as essences. This term is not recognized by the British Pharmacopœia, nor by that of the United States of America. The French Codex Medicamentarius uses the word essence as synonymous with essential oil; thus *Essence de Menthe Poivrée* is equivalent to our *Menthæ piperitæ Oleum*. It would therefore appear to be quite wrong to label spirit of peppermint as an essence. The word is undoubtedly homologous with the term essential oil, if not identical [illegible] meaning, and should be so used. In accepting a sample distinctly labelled 'Essen[illegible] mint' our inspectors are at fault, unless they were definitely informed by the [illegible] the article supplied was so supplied as equivalent to the spirit of peppermint, [illegible] *menthæ piperitæ* which they were instructed to purchase.

This is the first time that the article named has been officially inspected under the Act; and I beg respectfully to recommend the publication of this report as Bulletin 209.

I have the honour to be, sir,

Your obedient servant,

A. McGILL,
Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost. Quantity.	Cost. Cents.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	Results of Analysis. Sp. gr. of Sample.	Results of Analysis. Equivalent in alcohol (By Vol.)	Results of Analysis. Separated Oil.	Results of Analysis. Colour, &c.	No. of Sample.
DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.												
1910.									p. c.	p. c.		
Mar. 10	Spiritus Menthæ Piperitæ.	41936	A. A. Thompson, Halifax, N.S.	12 oz.	1.00	Vendor		0·8282	91·69	10·0	White	41936
" 10	"	41937	M. D. Logan, Halifax, N.S.	12 "	1.00	"		0·8342	89·83	10·0	"	41937
" 10	"	41938	Irwin & Sons, Halifax, N.S.	12 "	90	Vendors		0·8328	90·35	10·0	Pale yellowish green.	41938
" 10	"	41939	J. S. Coombes & Co., Halifax,	12 "	90	Vendor		0·8290	91·46	10·0	White and turbid.	41939
" 10	"	41940	G. McDougall, Kentville, N.S.	12 "	90	"		0·8338	90·05	10·0	White	41940
DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.												
Mar. 9	Spiritus Menthæ Piperitæ.	38666	E. Keir, Kensington	12 oz.	90	Vendor		0·8347	90·96	10·0	White	38666
" 10	"	38667	McNeill Drug Co., Summerside	12 "	1 20	Pure Gold Co., Toronto		0·9268	53·81	About 3·0	Bright green	*38667
" 15	"	38668	H. J. Mabon, Souris	12 "	1.00	Vendor		0·8369	90·90	5·0	Whitish yellow.	38668
" 15	"	38669	Dr. A. A. McDonald, Souris	12 "	1.00	Nat. Drug & Chem. Co., Halifax.		0·8783	74·59	About 3·5	Greenish	38669
" 17	"	38670	A. W. Reddin, Charlottetown	12 "	1.00	Vendor		0·8483	85·49	7·0	Yellow	38670

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Mar.	4	Spiritus Menthæ Piperitæ.	39680	The Nat. Drug & Chem. Co., Ltd., St. John, N.B.	12 "	1.05	The Nat. Drug & Chem. Co. Ltd., Montreal.	....	0·8265	92·21	About 3·0	Brownish green.	39680
"	15	"	39681	Chas. A. Burchill, Fredericton, N.B.	12 "	1.20	Vendor	....	0·8318	90·64	10·0	White	39681
Apr.	5	"	39682	B. J. Sharp, Sussex, N.B.	12 "	90	"	....	0·8357	89·49	5·0	Pale yellow	39682
"	5	"	39683	G. M. Fairweather, Sussex, N.B	12 "	1.00	"	....	0·8318	90·64	10·0	Greenish yellow.	39683
"	6	"	39684	Acadia Drug Co., Moncton, N.B	12 "	1.00	Vendors	....	0·8364	89·27	5·0	Yellow	39684

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

Mar.	9	Spiritus Menthæ Piperitæ.	36548	V. Giroux, 16 Rue St. Pierre, Quebec.	12 oz	1.20	Vendor	....	0·8451	86·58	10·0	White	36548
"	9	"	36549	G. P. Plamondon, 122 Rue St. Joseph, Quebec.	12 "	1.20	"	....	0·8250	92·66	5·0	Yellowish white.	36549
"	9	"	36550	W. B. Roger, 44 Rue de la Fabrique, Quebec.	12 "	1.20	"	....	0·8228	93·29	2·0	White	36550
"	9	"	36551	Lachevrotière, 224 Rue St. Jean Quebec.	12 "	1.20	"	....	0·8410	87·85	5·0	"	36551
"	9	"	36552	C. T. Delisle, 399½ Rue St. Jean Quebec.	12 "	1.20	"	....	0·8405	88·00	10·0	"	36552

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Mar.	9	Spiritus Menthæ Piperitæ.	995	Pharmacie Mâssicotte Victoriaville.	12 oz.	1.50	Vendors	....	0·8285	91·52	7·0	White	995
"	10	"	996	Pharmacie Chagnon, Sherbrooke	12 "	85	"	....	0·9067	62·93	3·0	"	996
"	15	"	997	Dr. Verdun, Granby	12 "	90	Vendor	....	0·8348	89·75	3·0	"	997
"	16	"	998	G. H. Johston, Cowansville	12 "	1.00	"	....	0·8573	82·44	10·0	Pale yellow	998
"	18	"	999	Dr. Viger, St. Hyacinthe	12 "	90	"	....	0·8341	89·96	7·0	White	999

* Aniline dye present.

BULLETIN No. 209—SPIRITUS MENTHÆ PIPERITÆ.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost. Quantity.	Cost. Cents.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	Results of Analysis. Sp. gr. of Sample.	Equivalent in alcohol (By Vol).	Separated Oil.	Colour, &c.	No. of Sample.
DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.												
1910.									p. c.	p. c.		
Mar. 3	Spiritus Menthæ Piperitæ.	40417	Quenneville & Guerin, 397 St. Antoine St., Montreal.	12 oz.	60	Vendors		0·9377	48·37	*	White	40417
" 5	"	40418	Henri Lanctot, 295 St. Catherine E., Montreal.	12 "	75	Vendor		0·8383	88·67	5·0	"	40418
" 5	"	40419	E. Vadboncoeur, 539 St. Catherine E., Montreal.	12 "	1·00	"		0·8365	91·21	5·0	"	40419
" 12	"	40420	O. T. Pinck, 207 McGill St., Montreal.	12 "	75	"		0·8253	92·57	2·0	"	40420
" 12	"	40421	E. F. Emery, 607 Notre Dame West, Montreal.	12 "	1·25	"		0·8454	86·48	3·0	"	40421
DISTRICT OF OTTAWA—J. A. RICKEY, INSPECTOR.												
Mar. 1	Spiritus Menthæ Piperitæ.	42926	R. B. Gray, Pembroke	12 oz.	90	Vendor	After purchase of Sample. Vendor stated that it was not Spiritus Menthæ Piperitæ but Essence of Peppermint.	0·9183	75·79	About 3·5	Deep yellow	42926
" 8	"	42927	J. L. Rochester, Ltd., Ottawa	12 "	1·20	Vendors		0·8323	90·49	10·0	White	42927
" 8	"	42928	T. Payment, Ottawa	12 "	1·20	Vendor		0·8286	91·57	10·0	"	42928
" 10	"	42929	R. S. Harrison, Ottawa	12 "	1·00	"		0·8279	91·78	2·0	Pale yellow	42929
" 10	"	42930	Jos. P. Valliquette, Ottawa	12 "	1·20	"		0·8278	91·81	5·0	White	42930

DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

Mar.	1	Spiritus Menthæ Piperitæ.	44251	F. Hoag, Kingston	12 oz	1.20	Vendor		0·8311	90·85	10·0	White	44251
"	1	"	44252	C. S. Prouse, Kingston	12 "	75	"		0·8002	69·84	2·0	Yellow	44252
"	1	"	44253	J. McLeod, Kingston	12 "	1.20	"		0·8334	90·17	5·0	"	44253
"	4	"	44254	A. P. Chown, Kingston	12 "	1.00	"		0·8480	85·59	2·0	White and cloudy.	44254
"		"	44255	McDermid & Jury, Peterboro.	12 "	1.05	Vendors		0·8280	91·49	7·5	White	44255

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

Mar.	3	Spiritus Menthæ Piperitæ.	41492	E. L. L. Doane, 1658 Dundas St. E., W. Toronto.	12 oz.	1.10	Vendor	Labelled Spts. Menth Pip.	0·8296	91·28	10·0	White	41492
"	4	"	41493	F. E. York, Aurora	12 "	1.00	"	Labelled Spts. Menth Pip. B. P.	0·8327	90·38	10·0	"	41493
"	8	"	41494	Hawkins Ltd., John St. South Hamilton.	12 "	75	Vendors	Labelled Ess. Menth Pip.	0·8275	91·90	2·0	Yellow	41494
"	16	"	41496	R. M. Black, 15 Ontario St., St. Catherines.	12 "	75	Vendor	Labelled Spts. Menth Pip. Vendor stated strength was 1 in 50.	0·8228	93·29	2·0	Pale yellow	41496
"	18	"	41497	G. Tamblyn, College Ave., Toronto.	12 "	90	"	Labelled Spts. Menth Pip.	0·8250	92·39	10·0	Green	41497

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Mar.	15	Spiritus Menthæ	44730	Dunlop Druggist, Goderich	6 oz.	60	Vendor		0·8292	91·40	10·0	White	44730

DISTRICT OF WINDSOR—JNO. TALBOT, INSPECTOR.

Mar.	5	Essence Peppermint.	42518	W. T. Strong, London	12 oz.	1.20	Vendor		0·8303	91·08	7·5	White	42518
"	7	"	42519	P. J. Gibbon, Sarnia	12 "	1.05	"		0·8307	90·96	5·0	Pale yellow	42519
"	7	"	42523	R. J. Gary, Sarnia	12 "	1.20	"		0·8250	91·46	5·0	"	42523
"	8	"	42530	Jackson & Co., Petrolia	12 "	1.00	Vendors		0·8236	93·06	5·0	White	42530
"	9	"	42538	Geo. A. Small, St. Thomas	12 "	1.00	Vendor		0·8252	92·60	5·0	"	42538

* None but smells of peppermint.

BULLETIN No. 209—SPIRITUS MENTHÆ PIPERITÆ.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost. Quantity.	Cost. Cents.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	Results of Analysis. Sp. gr. of Sample.	Equivalent in alcohol (By Vol.)	Separated Oil.	Colour, &c.	No. of Sample.
			DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.						p. c.	p. c.		
1910.												
Mar. 16	Spiritus Menthæ Piperitæ.	43406	R. T. Butchart, Minnedosa	12 oz.	1.50	Vendor		0·8298	91·23	10·0	Yellowish green.	43406
" 16	"	43407	Glenboro Drug Store, Glenboro	12 "	1.25	Norman B. Henery, Glenboro.		0·8284	91·63	10·0	Green	43407
" 21	"	43408	W. Collins & Co., Morden	12 "	1.00	Vendors		0·8275	91·90	5·0	White	43408
" 23	"	43409	P. F. Braund, Winnipeg	12 "	1.20	The Bole Drug Co., Winnipeg.		0·8296	91·28	10·0	"	43409
" 24	"	43410	A. J. Brown & Co., Winnipeg	12 "	1.20	Vendors		0·8295	91·31	10·0	"	43410
			DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.									
Mar. 8	Spiritus Menthæ Piperitæ.	35677	A. Archibald, Edmonton	12 oz.	1.25	Vendor		0·8302	91·11	8·0	White	35677
" 8	"	35678	Macdonalds Pharmacy, Edmonton.	12 "	1.50	D. W. Macdonald, Edmonton.		0·8311	90·85	10·0	"	35678
" 15	"	35679	C. S. Pringle, Medicine Hat	12 "	1.25	Vendor		0·8556	89·52	10·0	"	35679
" 15	"	35680	B. F. Souch, Medicine Hat	12 "	1.25	"		0·8326	90·40	10·0	"	35680
" 16	"	35681	W. Maclean, Calgary	12 "	1.25	"		0·8315	90·73	7·5	Green	35681

"	15	" ..	35680	B. F. Souch, Medicine Hat						0·8315	90·73	7·5	Green	35681
"	16	" ..	35681	W. Maclean, Calgary	12 "	1.25	"							

DISTRICT OF VANCOUVER—JNO. F. POWER, INSPECTOR.

Mar.	14	Spiritus Menthæ Piperitæ.	37843	Marrett & Reid, Vancouver, B.C.	12 oz.	1·25	Vendors			0·8299	91·20	10·0	White	37843
"	14	" ..	37844	Woodwards Dept. Store, Vancouver, B.C.	12 "	1.50	"			0·8318	90·64	8·0	"	37844
"	14	" ..	37845	Red Cross Drug Store Vancouver, B.C.	12 "	2.25	Vendor			0·8307	90·96	4·0	Yellowish green.	37845
"	14	" ..	37846	Red Raven Drug Store, Vancouver, B.C.	12 "	1.50	"			0·8306	90·99	5·0	"	37846
"	14	" ..	37847	Wilsons Drug Store, Vancouver B.C.	12 "	1·50	"			0·8607	81·12	3·0	White	37847

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Mar.	18	Spiritus Menthæ Piperitæ.	41669	F. J. Williams, Victoria, B.C.	12 oz.	1.25	Vendor			0·8306	90·99	10·0	White	41669
"	18	" ..	41670	W. S. Terry, Victoria, B.C.	12 "	75	"			0·8362	89·33	10·0	"	41670
"	18	" ..	41671	Hall & Co., Victoria, B.C.	12 "	1·50	Vendors			0·8326	90·40	10·0	"	41671
"	18	" .	41672	Wm. Jackson & Co., Victoria, B.C.	12 "	1·25	"			0·8325	90·43	10·0	"	41672
"	18	" ..	41673	Geo. A. Fraser, Victoria, B.C.	12 "	1.25	Vendor			0·8335	90·14	10·0	"	41673